Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period\_\_\_\_\_\_\_\_\_

Movie: ***National Geographic Solar System Formation***

1. What forms when nebulae (gas clouds in space) collapse? What doe call this theory?

2. How long ago did our nebula collapse and start to form our sun and solar system?

3. As the nebula contracts, spins faster and collapses, what forms in the center of this rotating disk?

4. What was born 4 and a half billion years ago?

5. The universe started with only hydrogen and helium from the big bang. But the inner planets are made iron, silica. Where process in the heart of a star creates these heavier elements??

6. When a star explodes, what is blasted into to space?

7. What are the two oldest types of material in the solar system?

8. How old are all the meteorites that strike earth?

9. What do we call it when small particles stick together in space??

10. What force makes planets grow in size and makes planets round?

11. How did the moon form?

12. What kind of planets are formed out past the asteroid belt?

13, Why did the outer planets form farther from the sun?

14. What happened to earth during the bombardment phase?

1. The Solar System is believed to have formed in a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

a. toxic cloud of fire

b. nebular cloud of gas ice and dust

c. swirling group of asteroids

d. huge black hole

2. About 4.6 billion years ago, a rotating mass of dust and gas gave rise to

a. The sun and several stars

b. The solar system

c. The Milky Way

d. Comets and meteors

3. What best explains why the inner rocky terrestrial planets are closest to the sun and the outer gassy jovian planets are farther from the sun? a. Intense heat from the sun caused materials to evaporate, producing the gas

planets closest to the sun

b. Cold temperatures caused Materials to freeze, producing the terrestrial

planets farthest from the sun

c. As our sun formed, the rocky planets could take the heat near the sun,

while the cold gassy planets made of Hydrogen and Helium could not

d. The sun’s gravity pulled in the small terrestrial planets, but was not strong

enough to the large gas planets in

### 4. What evidence do we have the solar system formed 4.6 billion years ago?

### a. minerals found on earth prove this true

### b. The oldest fossils on earth are 5 billion years old

### c. The ages of Meteorites, moon rocks and comets have been radiometrically dated between 4.5 and 5 billion years old

### d. All of the above

### 5. The moon formed by a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_with another small planet (planetesimal) in the early solar system

### 6. The solar system and sun formed in a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

7. Outer planets formed farther out past the frost line where it is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

### 8. The bombardment phase earth was pounded by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

### 9. The earth and solar system is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_years old.